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CBO

REPORT

The Effects of Automatic Stabilizers on the Federal Budget

May 2010

CONGRESSIONAL BUDGET OFFICE
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WASHINGTON, D.C. 20515

Notes

Numbers in the text and tables of this report may not add up to totals because of rounding.

Unless otherwise indicated, all of the years referred to are federal fiscal years.

Spreadsheets showing historical values for the budget deficit and related series with and without automatic stabilizers are available at www.cbo.gov.

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The Effects of Automatic Stabilizers on the Federal Budget

In March 2010, the Congressional Budget Office (CBO) released its most recent baseline projections of federal revenues, outlays, and budget balances for the next 10 years.[1] For those projections, CBO assumed the continuation of current laws and policies that affect taxes and mandatory spending programs and extrapolated the growth of discretionary spending by using projected rates of inflation. CBO estimated in March that the baseline budget deficit will total $463 billion in 2014, compared with a deficit of $1.4 trillion in 2009. The deficit was 9.9 percent of gross domestic product (GDP) in 2009—the largest share in more than half a century. By the end of 2014, CBO projects, the deficit will amount to 2.6 percent of GDP if current laws and policies remain in place.

Fluctuations in the budget deficit are influenced by legislation that governs taxation and spending and by the automatic responses of revenues and outlays to developments in the economy and other factors. This report focuses on a component of the latter group—the automatic stabilizers—that reflect cyclical movements in real (inflation-adjusted) output and unemployment.[2] During cyclical slowdowns and recessions, the economy grows more slowly than it could if it achieved its potential, and revenue growth declines automatically as well. In addition, some spending—for example, to pay unemployment insurance claims or to provide federal nutrition benefits—automatically increases. Those automatic reductions in revenues and increases in outlays help to bolster the economy, but they also temporarily increase the budget deficit. The opposite occurs when there are upturns in the business cycle; that is, automatic stabilizers tend to shrink as the economy moves toward its potential output. (For a discussion of automatic stabilizers and their uses, see the appendix.)

In 2009, CBO estimates, automatic stabilizers added the equivalent of 1.9 percent of potential GDP to the deficit, an amount substantially greater than the 0.3 percent added in 2008.[3] According to CBO's baseline projections, the contribution of automatic stabilizers to the budget deficit will be roughly 2.3 percent of potential GDP in 2010 and 2.5 percent of potential GDP in 2011. The contribution will then decrease to 2.0 percent in 2012, 1.0 percent in 2013, and 0.2 percent in 2014 (see Tables 1 and 2). The pattern arises because CBO expects that GDP will remain well below its potential in 2010 and 2011 but that the gap between actual and potential GDP will narrow in 2012 and 2013 and be nearly gone by 2014. Diminished tax revenues account for the bulk of the budgetary impact of automatic stabilizers. The reduction in revenues because of the GDP gap will average about 1.8 percent of potential GDP over the 2009–2012 period, CBO estimates.

1. See Congressional Budget Office, *An Analysis of the President's Budgetary Proposals for Fiscal Year 2011* (March 2010).

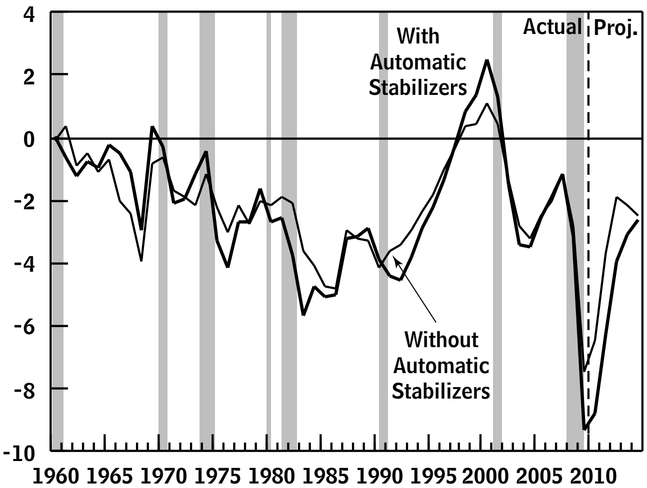
2. This is the same concept CBO previously referred to as the cyclical contribution to the budget balance. For a description of methodology for estimating automatic stabilizers that is similar to CBO's methodology, see Darrel Cohen and Glenn Follette, "The Automatic Fiscal Stabilizers: Quietly Doing Their Thing," in *Economic Policy Review,* Federal Reserve Bank of New York, vol. 6, no. 1 (April 2000), pp. 35–68.

3. That and subsequent calculations in this report involve potential, rather than actual, GDP because potential GDP excludes fluctuations that are attributable to the business cycle. Potential GDP is the quantity of output that corresponds to a high rate of use of labor and capital.

Figure 1.

Two Measures of Budget Deficits and Surpluses

(Percentage of potential gross domestic product)



Sources: Congressional Budget Office; Office of Management and Budget.

Notes: Automatic stabilizers are automatic changes in revenues and outlays that are attributable to cyclical movements in real (inflation-adjusted) output and unemployment.

Potential gross domestic product is the quantity of output that corresponds to a high rate of use of labor and capital.

The shaded vertical bars indicate periods of recession, which extend from the peak of a business cycle to its trough. The National Bureau of Economic Research establishes dates on which recessions begin and end but has not yet done so for the end of the most recent recession, which is shown here as having ended in the second quarter of 2009.

The dashed vertical line separates actual from projected data.

The budget balance without automatic stabilizers is an estimate of what the surplus or deficit would be if GDP was at its potential, the unemployment rate was at a corresponding level, and all other factors were unchanged. Such a budget measure has several applications. For example, some analysts use such a measure to discern underlying trends in government saving or dissaving (that is, trends in surpluses or deficits). Others use it to approximate whether the short-run influence of the budget on aggregate demand and on the growth of real output is positive or negative. More generally, the measure helps analysts estimate the extent to which changes in the budget balance are caused by movements of the business cycle and thus are likely to prove temporary rather than long-lasting.

Under CBO's baseline assumptions, the budget deficit without automatic stabilizers (previously called the cyclically adjusted deficit by CBO and sometimes called the structural deficit) would constitute 6.5 percent of potential GDP in 2010, down from 7.5 percent in 2009. CBO projects that the baseline deficit without automatic stabilizers will shrink further in the next two years, to 3.7 percent in 2011 and 1.9 percent in 2012, before increasing again, to 2.1 percent in 2013 and 2.5 percent in 2014 (see Figure 1).

The decrease in the deficit without automatic stabilizers from 2009 to 2010, as a percentage of potential GDP, results from several factors. Revenues are boosted by a jump in receipts to the Treasury from the Federal Reserve and from individual income taxes. The unusual increase in receipts from the central bank results from a shift in the Federal Reserve's portfolio to longer-term, riskier, and thus higher-yielding investments in support of the housing market and the broader economy. Receipts from individual income taxes rise relative to potential GDP in part because of real bracket creep (in which growth in inflation-adjusted income causes more income to be taxed in higher tax brackets) and increases in taxable pension distributions and in distributions from individual retirement accounts. In addition, total spending rises very little in nominal terms (and thus declines as a share of GDP) because substantial reductions in outlays for the Troubled Asset Relief Program and for federal assistance to Fannie Mae and Freddie Mac offset most of the increase in other spending.

For 2011, the projected decline in the deficit without automatic stabilizers as a percentage of potential GDP results largely from the scheduled expiration in December 2010 of tax cuts enacted in 2001 and 2003 and from the additional taxes that will be paid in 2011 because, under current law, many more households will be subject to the alternative minimum tax. The projected further decrease in the deficit without automatic stabilizers for 2012 occurs because of additional revenue gains attributable to the expiration of tax cuts in 2010, other factors that raise effective tax rates, and a waning of spending under the American Recovery and Reinvestment Act of 2009.[4] The projected increases in the deficit without automatic stabilizers in 2013 and 2014 can be attributed to projected growth in interest payments, which amounts to 0.3 percent of potential GDP each year. Noninterest spending without automatic stabilizers does not change as a percentage of potential GDP.

4. The expiration of the tax cuts will result in more revenues in 2012 than in 2011 primarily because the resulting higher tax rates will affect withheld taxes for all four quarters of fiscal year 2012, compared with three quarters of fiscal year 2011.

Table 1.

The Budget Deficit or Surplus With and Without Automatic Stabilizers and Related Series in Billions of Dollars, 1962 to 2014

	Budget Deficit (-) or Surplus With Automatic Stabilizers	− Automatic Stabilizers	= Budget Deficit (-) or Surplus Without Automatic Stabilizers	Budget Revenues and Outlays Without Automatic Stabilizers		GDP Gap[a]	Unemployment Gap (Percent)[b]
				Revenues	Outlays		
1962	-7	-2	-5	101	106	-7	0.5
1963	-5	-2	-3	108	111	-6	0.1
1964	-6	1	-7	112	119	3	-0.1
1965	-1	3	-5	114	119	10	-0.7
1966	-4	11	-14	122	136	33	-1.7
1967	-9	10	-19	141	160	29	-2.0
1968	-25	8	-34	147	180	23	-2.0
1969	3	11	-8	179	187	26	-2.4
1970	-3	3	-6	192	198	3	-1.9
1971	-23	-4	-19	191	210	-15	-0.2
1972	-23	-1	-22	209	231	-5	-0.1
1973	-15	12	-27	220	247	39	-0.9
1974	-6	10	-16	255	272	28	-1.2
1975	-53	-17	-36	293	329	-56	1.2
1976	-74	-20	-54	313	367	-53	1.8
1977	-54	-11	-43	364	406	-28	1.1
1978	-59	2	-61	398	459	7	*
1979	-41	10	-50	456	506	26	-0.4
1980	-74	-14	-60	528	588	-47	0.6
1981	-79	-21	-58	615	673	-52	1.2
1982	-128	-56	-72	665	737	-188	3.0
1983	-208	-74	-133	663	797	-230	4.1
1984	-185	-25	-160	689	850	-76	1.8
1985	-212	-13	-199	744	943	-35	1.2
1986	-221	-9	-213	775	987	-20	1.0
1987	-150	-13	-137	866	1,003	-36	0.4
1988	-155	6	-162	905	1,067	20	-0.3
1989	-153	21	-174	973	1,147	58	-0.7
1990	-221	14	-235	1,020	1,255	28	-0.5
1991	-269	-51	-219	1,100	1,318	-161	0.8
1992	-290	-69	-221	1,150	1,371	-171	1.7
1993	-255	-57	-198	1,203	1,402	-140	1.5
1994	-203	-38	-165	1,293	1,458	-83	0.9
1995	-164	-27	-137	1,378	1,515	-77	0.3
1996	-107	-29	-78	1,481	1,559	-72	0.3
1997	-22	5	-27	1,575	1,602	28	*
1998	69	38	31	1,688	1,657	100	-0.5
1999	126	86	39	1,747	1,708	230	-0.7

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Table 1. **Continued**

The Budget Deficit or Surplus With and Without Automatic Stabilizers and Related Series in Billions of Dollars, 1962 to 2014

	Budget Deficit (-) or Surplus With Automatic Stabilizers	− Automatic Stabilizers	= Budget Deficit (-) or Surplus Without Automatic Stabilizers	Budget Revenues and Outlays Without Automatic Stabilizers		GDP Gap[a]	Unemployment Gap (Percent)[b]
				Revenues	Outlays		
2000	236	133	103	1,900	1,797	337	-1.0
2001	128	81	47	1,915	1,867	155	-0.7
2002	-158	-17	-141	1,861	2,002	-57	0.7
2003	-378	-65	-313	1,837	2,150	-186	1.0
2004	-413	-36	-377	1,911	2,288	-82	0.6
2005	-318	-7	-312	2,160	2,472	-5	0.2
2006	-248	14	-262	2,398	2,660	32	-0.3
2007	-161	0	-161	2,574	2,735	-26	-0.5
2008	-459	-47	-412	2,565	2,976	-169	0.3
2009	-1,413	-282	-1,131	2,326	3,457	-932	3.5
2010	-1,368	-351	-1,018	2,450	3,467	-983	5.2
2011c	-996	-403	-593	3,011	3,604	-970	4.8
2012c	-642	-331	-310	3,256	3,566	-696	3.4
2013c	-525	-163	-362	3,368	3,730	-301	1.7
2014c	-463	-29	-433	3,498	3,931	-22	0.4

Sources: Congressional Budget Office; Office of Management and Budget.

Notes: Automatic stabilizers are automatic changes in revenues and outlays that are attributable to cyclical movements in real (inflation-adjusted) output and unemployment.

GDP = gross domestic product; * = between -0.05 percent and 0.05 percent.

a. The GDP gap equals actual (or projected) GDP minus potential GDP (the quantity of output that corresponds to a high rate of use of labor and capital).

b. The unemployment gap equals the actual (or projected) rate of unemployment minus the natural rate of unemployment, which is the rate of unemployment arising from all sources except fluctuations in aggregate demand.

c. Projected using CBO's baseline assumptions.

Table 2.

The Budget Deficit or Surplus With and Without Automatic Stabilizers and Related Series as a Percentage of Potential GDP, 1962 to 2014

	Budget Deficit (-) or Surplus With Automatic Stabilizers	− Automatic Stabilizers	= Budget Deficit (-) or Surplus Without Automatic Stabilizers	Budget Revenues and Outlays Without Automatic Stabilizers			
				Revenues	Outlays	GDP Gap[a]	Unemployment Gap (Percent)[b]
1962	-1.2	-0.4	-0.9	17.6	18.5	-1.1	0.5
1963	-0.8	-0.3	-0.5	17.9	18.4	-1.1	0.1
1964	-0.9	0.2	-1.1	17.5	18.6	0.4	-0.1
1965	-0.2	0.5	-0.7	16.8	17.6	1.5	-0.7
1966	-0.5	1.5	-2.0	16.9	18.9	4.6	-1.7
1967	-1.1	1.3	-2.4	18.1	20.5	3.8	-2.0
1968	-3.0	1.0	-4.0	17.4	21.3	2.7	-2.0
1969	0.4	1.2	-0.8	19.4	20.3	2.9	-2.4
1970	-0.3	0.3	-0.6	19.0	19.6	0.3	-1.9
1971	-2.1	-0.4	-1.7	17.5	19.2	-1.4	-0.2
1972	-2.0	-0.1	-1.9	17.7	19.5	-0.4	-0.1
1973	-1.2	1.0	-2.1	17.3	19.5	3.1	-0.9
1974	-0.4	0.7	-1.2	18.1	19.3	2.0	-1.2
1975	-3.3	-1.1	-2.2	18.1	20.3	-3.5	1.2
1976	-4.1	-1.1	-3.0	17.5	20.5	-3.0	1.8
1977	-2.7	-0.6	-2.1	18.2	20.3	-1.4	1.1
1978	-2.7	0.1	-2.8	18.0	20.8	0.3	*
1979	-1.6	0.4	-2.0	18.4	20.4	1.0	-0.4
1980	-2.7	-0.5	-2.2	19.1	21.2	-1.7	0.6
1981	-2.5	-0.7	-1.9	19.8	21.7	-1.7	1.2
1982	-3.8	-1.6	-2.1	19.5	21.6	-5.5	3.0
1983	-5.7	-2.0	-3.6	18.1	21.7	-6.3	4.1
1984	-4.7	-0.6	-4.1	17.6	21.7	-1.9	1.8
1985	-5.1	-0.3	-4.8	17.8	22.6	-0.8	1.2
1986	-5.0	-0.2	-4.8	17.5	22.3	-0.4	1.0
1987	-3.2	-0.3	-2.9	18.5	21.4	-0.8	0.4
1988	-3.1	0.1	-3.2	18.1	21.4	0.4	-0.3
1989	-2.9	0.4	-3.3	18.2	21.5	1.1	-0.7
1990	-3.9	0.2	-4.1	17.9	22.0	0.5	-0.5
1991	-4.4	-0.8	-3.6	18.0	21.6	-2.6	0.8
1992	-4.5	-1.1	-3.4	17.9	21.4	-2.7	1.7
1993	-3.8	-0.8	-2.9	17.9	20.8	-2.1	1.5
1994	-2.9	-0.5	-2.3	18.3	20.7	-1.2	0.9
1995	-2.2	-0.4	-1.8	18.6	20.4	-1.0	0.3
1996	-1.4	-0.4	-1.0	19.0	20.0	-0.9	0.3
1997	-0.3	0.1	-0.3	19.2	19.6	0.3	*
1998	0.8	0.4	0.4	19.7	19.4	1.2	-0.5
1999	1.4	1.0	0.4	19.5	19.0	2.6	-0.7

Continued

Table 2. **Continued**

The Budget Deficit or Surplus With and Without Automatic Stabilizers and Related Series as a Percentage of Potential GDP, 1962 to 2014

	Budget Deficit (-) or Surplus With Automatic Stabilizers	− Automatic = Stabilizers	Budget Deficit (-) or Surplus Without Automatic Stabilizers	Budget Revenues and Outlays Without Automatic Stabilizers			
				Revenues	Outlays	GDP Gap[a]	Unemployment Gap (Percent)[b]
2000	2.5	1.4	1.1	20.0	19.0	3.6	-1.0
2001	1.3	0.8	0.5	19.0	18.5	1.5	-0.7
2002	-1.5	-0.2	-1.3	17.6	18.9	-0.5	0.7
2003	-3.4	-0.6	-2.8	16.5	19.3	-1.7	1.0
2004	-3.5	-0.3	-3.2	16.2	19.4	-0.7	0.6
2005	-2.6	-0.1	-2.5	17.3	19.9	*	0.2
2006	-1.9	0.1	-2.0	18.2	20.2	0.2	-0.3
2007	-1.2	*	-1.2	18.5	19.6	-0.2	-0.5
2008	-3.1	-0.3	-2.8	17.6	20.4	-1.2	0.3
2009	-9.3	-1.9	-7.5	15.3	22.8	-6.1	3.5
2010c	-8.8	-2.3	-6.5	15.7	22.3	-6.3	5.2
2011c	-6.2	-2.5	-3.7	18.9	22.6	-6.1	4.8
2012c	-3.9	-2.0	-1.9	19.8	21.7	-4.2	3.4
2013c	-3.1	-1.0	-2.1	19.8	22.0	-1.8	1.7
2014c	-2.6	-0.2	-2.5	19.8	22.3	-0.1	0.4

Sources: Congressional Budget Office; Office of Management and Budget.

Notes: Automatic stabilizers are automatic changes in revenues and outlays that are attributable to cyclical movements in real (inflation-adjusted) output and unemployment. Potential GDP is the quantity of output that corresponds to a high rate of use of labor and capital.

GDP = gross domestic product; * = between -0.05 percent and 0.05 percent.

a. The GDP gap equals actual (or projected) GDP minus potential GDP.

b. The unemployment gap equals the actual (or projected) rate of unemployment minus the natural rate of unemployment, which is the rate of unemployment arising from all sources except fluctuations in aggregate demand.

c. Projected using CBO's baseline assumptions.

Appendix: Measuring the Budgetary Effects of Automatic Stabilizers

The size of the budget deficit is influenced by policy changes and by the automatic responses of revenues and outlays to economic developments and other factors. In addition to the effects of changes in real (inflation-adjusted) output and unemployment—which are most pronounced during recessions—key economic factors include changes in the long-term (trend) growth rate of output and income, movements in the proportion of income subject to taxation and the distribution of that income, and variations in interest rates and in the pace of inflation.

This report measures the effect on the budget of automatic stabilizers, which are automatic changes in revenues and outlays that are driven by the business cycle. Those stabilizers mitigate the decline of real income in recessions and dampen its growth in booms. The Congressional Budget Office (CBO) estimates that in fiscal year 2000, automatic stabilizers contributed to the budget surplus an amount that was equal to 1.4 percent of potential gross domestic product (GDP), indicating that the strength of the economy was significantly augmenting the budget surplus. By 2002, the automatic stabilizers' contribution had turned negative, in CBO's estimation, because the economy was operating below its potential and adding to the budget deficit. Significant negative contributions persisted through 2004. From 2005 through 2007, the effects of the automatic stabilizers were quite small because the economy was close to its potential. More recently, they have contributed much more to the deficit as the economy has operated significantly below its potential.

CBO arrives at its estimate of the deficit without automatic stabilizers by removing their effects from the total budget deficit. For revenues, CBO estimates taxable income as though overall output equaled its potential, and it translates the difference between that income and actual income into cyclical losses in revenue. For outlays, CBO estimates what unemployment would be if output were at its potential, and it translates the difference between that number and actual unemployment into cyclical increases in spending for unemployment insurance benefits and other income support programs.

Economic factors (such as inflation and interest rates) that are not directly cyclical and are therefore not removed from the estimates presented in this report also have automatic effects on the budget. For example, a higher rate of inflation would boost the dollar value of taxable income and thus increase federal tax receipts. Because interest rates also are affected by inflation, federal interest payments would be higher. Spending that is indexed for inflation (Social Security benefits, for example) also would increase. However, such budget effects of factors other than changes in real output and unemployment are not analyzed here.

In a few cases, CBO's analysis of automatic stabilizers attempts to adjust for the budgetary effects of economic factors whose connection to cyclical fluctuations has varied over time. For example, fluctuations in tax receipts from realized capital gains appear to have moved more closely with the business cycle recently than in earlier cycles; CBO's estimates of automatic stabilizers incorporate the changing relationship over time. Similarly, compensation bonuses, which tend to be concentrated among taxpayers in relatively high tax brackets and which thus affect the effective tax rate on total wages and salaries, seem to have become more cyclical, and that too is reflected in the estimates. Changes over time in the cyclical differences between taxable corporate profits and corporate profits as measured in the national income and product accounts also are accounted for in CBO's calculation of the budgetary effects of the automatic stabilizers.

Despite adjustments to revenues and outlays for the automatic effects of the business cycle, the deficit without automatic stabilizers can exhibit apparently regular cyclical characteristics—such as increases during times of recession and early recovery. In part, that pattern reflects policy responses to recessions. The government often chooses to stimulate a weakening economy by cutting taxes or increasing government spending, both of which increase the deficit (or reduce the surplus). The American Recovery and Reinvestment Act of 2009; the Troubled Asset Relief Program (TARP); and the Housing and Economic Recovery Act of 2008, which led to federal conservatorship of Fannie Mae and Freddie Mac, were deficit-raising measures enacted to directly or indirectly address the recent recession. Such responses to recessions are not "automatic," however, because they require legislation, and their budget effects thus are not part of the automatic stabilizers. Another reason that the deficit without automatic stabilizers can exhibit residual cyclical movements is that estimates of the budgetary impact of automatic stabilizers might only partly remove the effects of factors (such as large fluctuations in the stock market) that have not had a sufficiently regular relationship to business cycles to be viewed as mostly cyclical.

In its annual reports on the budget and the economy, CBO presents "rules of thumb" that describe how the budget balance would differ if certain economic outcomes were different than projected.[1] Those estimates attempt to capture the effects of sustained changes in the rate of growth of GDP and other economic variables, whereas the estimates in this report are meant to filter out temporary fluctuations that are attributable to automatic stabilizers.

1. See Congressional Budget Office, *The Budget and Economic Outlook: Fiscal Years 2010 to 2020* (January 2010), Appendix C.